

AMENDMENTS TO THE CLAIMS

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Claim 1. (currently amended) A method in a distributed system for communicating in a network with a source node and a destination node, the method comprising the steps of:

accessing an address of the destination node by the source node, wherein the source node and the destination node are programs;

sending a first packet by the source node to the destination node by using the accessed address;

receiving the first packet by the destination node at the accessed address of the destination node;

updating the accessed address to ~~reflect a new address of the destination node~~ responsive to a change in the address of the destination node to the a new address wherein the updating includes

sending an update packet containing the new address of the destination node from the destination node to the source node, and

storing, by the source node, the new address of the destination node, responsive to receiving the update packet;

sending a second packet by the source node to the destination node by using the stored new address; and

receiving the second packet by the destination node at the new address of the destination node.

Claim 2. (currently amended) The method of claim 1, wherein the source node and the destination node have a local address cache, and wherein the receiving the first packet step includes the steps of:

storing, in the local cache of the destination node, an address of the sending node; and

wherein the updating step further includes the steps of:

retrieving from the local cache of the destination node the address of the sending node; and

~~sending a third packet containing the new address of the destination node to the source node by the destination node using the address of the source node;~~

~~receiving the third packet by the source node; and~~

storing, in the local cache of the source node, the new address of the destination node.

Claim 3. (previously amended) The method of claim 1, wherein the distributed system has a central address store, the method further comprising the steps of:

storing an address of the source node and the destination node in the central address store; and

wherein the sending a first packet step further includes the step of:

accessing the address of the destination node from the central address store; and

wherein the updating step further includes the steps of:

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sending a third packet containing the new address of the destination node to the central address store by the destination node; and
storing the new address of the destination node in the central address store; and
accessing the new address by the source node.

Claim 4. (currently amended) The method of claim 1, wherein the source node and the destination node communicate with other nodes by using a multicast address such that a communication sent to the multicast address is sent to the source node, the destination node, and the other nodes, the source node and the other nodes having a local cache, wherein the updating step further includes the steps of:

31 sending a ~~third~~ update packet containing the new address of the destination node to the source node by the destination node using the multicast address;

receiving the ~~third~~ update packet by the source node and the other nodes;
and

storing in the local cache of the source node and the other nodes the new address of the destination node.

Claim 5. (currently amended) The method of claim 1, wherein the source node and the destination node have a local address cache and communicate by using a multicast address such that a communication sent to the

multicast address is sent to a multicast group including the source node and the destination node, and wherein the updating step further includes the steps of:

 sending a joining request, by the destination node, to a router to add the new address of the destination node to the multicast group;

 sending a message, by the source node, to the destination node via the multicast address;

 receiving the message by the destination node;

 sending ~~a third~~ the update packet containing the new address of the destination node by the destination node to the source node, using ~~an address of the source node~~ the multicast address; and

~~receiving the third packet by the source node; and~~

 storing the new address of the destination node in the local cache of the source node.

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Claim 6. (original) The method of claim 1 wherein the network is a private network running on a public network infrastructure.

Claims 7. (original) The method of claim 1 wherein the change in the address of the destination node to the new address is caused by a device on which the destination node runs physically changing locations.

Claim 8. (currently amended) A method in a distributed system for communicating in a network with a source node and a destination node, the method comprising the steps of:

receiving a first packet by the destination node, at an address of the destination node, from the source node, the packet being addressed to the address of the destination node, wherein the source node and the destination node are programs;

updating the address of the destination node to a new address responsive to a change in the address of the destination node to the new address wherein the updating includes:

sending an update packet containing the new address of the destination node from the destination node to the source node, and

storing, by the source node, the new address of the destination node, responsive to receiving the update packet; and

receiving a second packet by the destination node at the new address.

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Claim 9. (currently amended) The method of claim 8, wherein the destination node has a local address cache, and wherein the receiving first packet step includes the steps of:

storing, in the local cache of the destination node, an address of the sending node; and

wherein the updating step further includes the steps of:

retrieving from the local cache of the destination node the address of the sending node; and

~~sending a third packet containing the new address of the destination node by the destination node to the source node, using the address of the source node.~~

Claim 10. (previously amended) The method of claim 8, wherein the distributed system has a central address store, the method further comprising the steps of:

storing an address of the source node and an address of the destination node in the central address store; and

wherein the updating step further includes the step of:

sending a third packet containing the new address of the destination node to the central address store by the destination node .

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Claim 11. (currently amended) The method of claim 8, wherein the source node and the destination node communicate with other nodes by using a multicast address such that a communication sent to the multicast address is sent to the source node, the destination node, and the other nodes, the source node and the other nodes having a local cache, and wherein the updating step further includes the step of:

sending a ~~third~~ the update packet containing the new address of the destination node to the source node by the destination node using the multicast address.

Claim 12. (currently amended) The method of claim 8, wherein the source node and the destination node have a local address cache and communicate by using a multicast address such that a communication sent to the multicast address is sent to a multicast group including the source node and the destination node, and wherein the updating step further includes the steps of:

sending a joining request, by the destination node, to a router to add the new address of the destination node to the multicast group;

receiving a message from the source node by the destination node, via the multicast address; and

sending a ~~third~~ the update packet containing the new address of the destination node by the destination node to the source node, using the address for the source node.

Claim 13. (original) The method of claim 8 wherein the network is a private network running on a public network infrastructure.

Claim 14. (original) The method of claim 8 wherein the change in the address of the destination node to the new address is caused by a device on which the destination node runs physically changing locations.

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Claim 15. (currently amended) A method in a data processing system for communicating in a network with a source node and a destination node, wherein each node has an address, the method comprising the steps of:

sending a first packet from the source node to the destination node by using the address of the destination node, wherein the source node and the destination node are programs;

receiving an update packet containing a new address by the source node to supersede the address of the destination node responsive to a change in the address of the destination node to the new address; and

storing, by the source node, the new address of the destination node,
responsive to receiving the update packet; and

sending a second packet from the source node to the destination node by using the new address.

Claim 16. (original) The method of claim 15, wherein the network is a private network running on a public network infrastructure.

Claim 17. (original) The method of claim 15 wherein the change in the address of the destination node to the new address is caused by a device on which the destination node runs physically changing locations.

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Claim 18. (currently amended) A distributed system with a plurality of devices, comprising:

a first of the devices comprising:

a memory with a source node that sends a first packet to a destination node using an address of the destination node, that receives an update packet from the destination node containing a new address to supersede the address of the destination node responsive to a change in the address of the destination node to the new address, and that sends a second packet to the destination node using the new address;

a processor that runs the source node; and

a second device comprising:

a memory with the destination node that receives the first packet at the address and that sends the update packet containing the new address to the

source node in response to the change in the address of the destination node to the new address, and that receives the second packet; and
a processor for running the destination node.

Claim 19. (original) The distributed system of claim 18 wherein the network is a private network running on a public network infrastructure.

Claim 20. (original) The distributed system of claim 18 wherein the change in the address of the destination node to the new address is caused by a device on which the destination node runs physically changing locations.

Claim 21. (currently amended) A data processing system for communicating in a network with a source node and a destination node, the data processing system comprising:

means for accessing an address of the destination node;

means for sending a first packet by the source node to the destination node by using the accessed address;

means for receiving the first packet by the destination node at the address of the destination node;

means for updating the accessed address ~~to reflect a new address of the destination node~~ responsive to a change in the address of the destination node to the a new address, wherein the updating means includes:

means for sending an update packet containing the new address of the destination node from the destination node to the source node, and

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means for storing, by the source node, the new address of the destination node, responsive to receiving the update packet;

means for sending a second packet by the source node to the destination node by using the stored new address; and

means for receiving the second packet by the destination node at the new address of the destination node.

Claim 22. (currently amended) A computer-readable medium containing instructions for controlling a data processing system to perform a method, the method for communicating in a network with a source node and a destination node, wherein each node has an address, the method comprising the steps of:

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sending a first packet from the source node to the destination node by using the address of the destination node, wherein the source node and the destination node are programs;

receiving an update packet from the destination node containing a new address by the source node to supersede the address of the destination node responsive to a change in the address of the destination node to the new address; and

sending a second packet by the source node to the destination node by using the new address.

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Claim 23. (original) The computer-readable medium of claim 22 wherein the network is a private network running on a public network infrastructure.

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Claim 24. (original) The computer-readable medium of claim 22 wherein the change in the address of the destination node to the new address is caused by a device on which the destination node runs physically changing locations.

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